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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/022.980	12/17/2001	Hiroyuki Harada	060151-0278271	4234

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EXAMINER

NGUYEN, TRAN N

ART UNIT PAPER NUMBER

2834

DATE MAILED: 08/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/022,980

Applicant(s)

HARADA ET AL.

Examiner

Tran N. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 16 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1, 12 and 13 is/are rejected.
- 7) ☐ Claim(s) 2-11 and 14-17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Double Patenting

The non-statutory double patenting rejection, whether of the obviousness-type or non-obviousness-type, is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent. *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); and *In re Goodman*, 29 USPQ2d 2010 (Fed. Cir. 1993).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(b) and © may be used to overcome an actual or provisional rejection based on a non-statutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.78(d).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 12, and 13 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-11 of U.S. Patent **6342744 to Harada et al** (hereafter, USP '744) in view of level of ordinary skill of a worker in the art.

Claims 1-11 of USP '744 are similar to claimed invention, both the Patent and the present application having the following common subject matters:

A direct current motor comprising:

an armature having a core and coils wound on the core;

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magnets arranged to face each other through the armature;

a commutator operatively connected to the coils; and

a brush disposed in sliding contact with the commutator for shorting each coil during a commutation period to reverse a direction of current in the coil, wherein each magnet has an extension at an end thereof to generate in the coil an induction voltage that counteracts the reactance voltage, wherein the extension is provided at the end of the magnet in a direction of rotation of the armature and a thickness of the extension is gradually increased in the direction of rotation of the armature, wherein each magnet has a thinned part and the thickness of the extension is increased from the thinned part (this is understood as: *each magnet includes a main portion; an extended portion extending from the main portion; a first weak flux part, which is located in the vicinity of the border of the extended portion and the main portion, and the flux of the first weak flux part gradually increases along the rotation direction of the armature, in the present claimed invention*);

the core has a plurality of teeth thereon; the extension is provided outside an angular interval defined by centers of a first tooth and a last tooth of the teeth;

a commutator fixed to the armature and operatively connected to the coils, and wherein the extension is provided at an end of the main part in a direction of rotation of the armature to change an amount of magnetic flux passing through the coil thereby to generate an induction voltage in the coil during a period of commutation of the coil.

USP '744 claims are substantially the same as the claimed in the present application, except for the following:

when commutation is started for a group of teeth, which represented by n , the advancing end of the first tooth in that teeth group, the first tooth being located at the most advanced position in the group in the rotation direction of the armature, is aligned with the first weak flux part of one of the magnets, as in claim 1; or,

the number of teeth belonging to the same group is represented by n , and wherein the position of each brush is determined such that, when the first tooth in one of the teeth groups, the first tooth being located at the most advanced position in the group in the rotation direction of the armature, is aligned with the first weak flux part of one of the magnets, the brush starts

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establishing a short circuit in an adjacent pair of segments that connects the coil, as in claim 12;
or

the number of teeth belonging to the same group is represented by n , and wherein, when the circumferential center of the first tooth in the group is aligned with the most advancing portion of the main portion in the rotation direction of the armature, the most trailing end of the main portion in the rotation direction of the armature is circumferentially located between the n th tooth and $(n-1)$ th tooth; and wherein, when commutation is started for a group of teeth, the advancing end of the first tooth in that teeth group is aligned with the first weak flux part of one of the magnets, as in claim 13.

Those skilled in the art would realize that these are arrangement of the positions between the magnets and the armature teeth. It would have been obvious to one having ordinary skill in the art at the time the invention was made to rearrange the positions between the armature teeth and the magnets because this would improve the commutation in order to prevent brush sparks. This is obvious because it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

Allowable Subject Matter

Claims 2-11 and 14-17 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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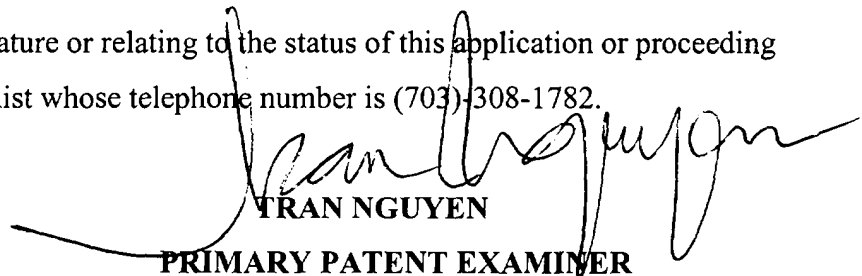
however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tran N Nguyen whose telephone number is (703) 308-1639. The examiner can normally be reached on M-F 6:00AM-2:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703)-308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-3431 for regular communications and (703)-395-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-1782.



TRAN NGUYEN
PRIMARY PATENT EXAMINER

TC-2800